
REMARKS

As noted above, the present application is a Continuation of U.S. Application Serial No. 09/598,530, filed June 21, 2000, the specification of which is incorporated herein by reference.

Claims 1, 8, and 16 have been amended, no claims have been cancelled, claims 21-24 have been added; as such, claims 1-24 are presently pending in the case.

During prosecution of the parent application, an office action dated March 7, 2003 (the "office action"), rejected original independent claims 16-20 as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner also rejected original claims 1-3, 6-9, 11-14, 16 and 18-19 as being anticipated by the article, "Complexity Analysis for Partitioning Nearest Neighbor Searching Algorithms" by Zakarauskas et al. (hereafter "Zakarauskas"). In addition, the Examiner objected to original claims 4, 5, 10 and 15 indicating that they contained subject matter that would be allowable if combined with elements and limitations of their respective base claims and any intervening claims.

In the interest of furthering the prosecution of the parent case the Applicant placed the objected to subject matter into condition for immediate allowance and cancelled those claims which stood rejected in the office action. The present preliminary amendment addresses additional allowable subject matter as supported by the specification of the parent case as originally filed.

In the office action of the parent case, the Examiner rejected claim 16 under 35 USC 112, first paragraph. The Examiner asserted that a system was not shown in the Figures. In the present continuation, Applicant has amended the preamble of independent claim 16 to read "a pattern recognition system".

In the Application, as originally filed, the Applicant recites on page 3 that the "illustrations (e.g. Figures 1 and 2) are symbolic of numerical data elements stored in the memory device of a computer... running software modules operating according to the methods described below." The Applicant later refers to the actions, collectively performed on the data, as part of a pattern recognition

system. (See Spec. page 3, line 28-29). Accordingly, Applicant believes that independent claim 16, as well as the claims which depend therefrom, are supported by the specification and drawings and should be allowable.

In the office action of the parent case, claim 16 was also rejected based on the system being inherent in the method of Zakarauskas. Zakarauskas appears to describe identifying a target pattern and then creating a radially expanding p-sphere emanating therefrom. The p-sphere expands until it locates k-number of patterns. (See pg. 664, left column, paragraph "2 Search Algorithms"). Zakarauskas does not describe identifying a first bin that contains a target point, searching a first bin for a first candidate point, and identifying a set of proximate bins selected from a matrix, each of the proximate bins having at least a portion potentially closer to the target point than the first candidate point. Zakarauskas continues until k-number of patterns is located.

In contrast, Applicant's independent claim 16, as amended, recites;

an analysis module executing on a processor wherein the analysis module is configured to generate a matrix of bins, to identify a first bin that contains the target point, to search the first bin for a first candidate point, and to identify a set of proximate bins selected from the matrix, each of the proximate bins having at least a portion potentially closer to the target point than the first candidate point.

Since each and every element and limitation of Applicant's independent claim 16, as amended, is not found in Zakarauskas, Applicant believes that claim 16, as well as the claims which depend therefrom, are allowable.

As noted above, original claims 1 and 8 were also rejected in the office action of the parent Application based on Zakarauskas. From the Applicant's review of the Zakarauskas reference, the reference states:

There must exist an optimal value of n since, if n grows very large, many more patterns must be matched than only those contained in the search p-sphere. On the other hand, if n is very small, the number of buckets becomes very large and the overhead of selecting the buckets increases. (See pg. 664, right column, paragraph "3 Analysis of Performance").

Zakarauskas appears to describe a method to identify an optimal bin (or "bucket") dimension dependant on the number of points (or "patterns (*n*)") per bin (or "bucket"). In contrast, the Applicant's method of generating bin dimensions is not dependent on a number of points per bin. That is, as recited in independent claims 1 and 8 of the present continuation application, is not dependant on point (or "pattern") numbers or point (or "pattern") distribution.

On this point the Applicant notes, by way of example and not by way of limitation, that independent claims 1 and 8, currently amended, recites:

generating a matrix of bins, wherein bin width is determined by the difference between a maximum and a minimum value, from among the set of candidate points, divided by the number of bins;

Support for this language is found in the Applicant's specification which reads as follows:

the bin width is determined by the difference between the maximum and minimum [point] values, divided by the number of bins. In an alternative embodiment, the bin values are set at convenient numbers to the actual parameters used, and the bin limits set so that the minimum value falls in the first bin, and the maximum value falls in the last bin.

While each axis or parameter may include values of any large or small numerical value, each may be re-scaled to a numerically convenient scale so that all axes have the same values. (See Spec. page 4, lines 25-32).

Applicant respectfully submits that generating a matrix of bins, wherein bin width is determined by the difference between a maximum and a minimum value, from among the set of candidate points, divided by the number of bins, is not dependant on point (or "pattern") numbers or point (or "pattern") distribution.

The Applicant's specification further indicates that according to this method "a simplified database is generated without including space intensive precise values of each point in each axis." (See Spec. page 5, lines 7-9).

Since Zakarauskas does not contain each and every element and limitation of Applicant's independent claims 1 and 8, as amended, Applicant believes these claims, as well as the claims which depend therefrom, are allowable. Applicant

respectfully requests consideration of the same upon consideration of the present continuation.

NEW CLAIMS

Applicant has added new claims 21-24. Claims 21-24 are added to further illustrate distinguishing features of the present application. Claims 21-24 are fully supported by the specification as originally filed, do not introduce any new matter, and are hereby introduced solely for the purpose of exhibiting additional claimable embodiments available for the application as originally filed. Accordingly, Applicant respectfully requests consideration of new claims 21-24 upon review of this case.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (360) 212-8052 to facilitate prosecution of this matter.

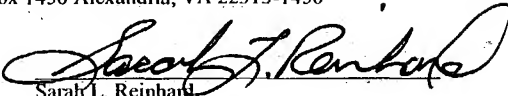
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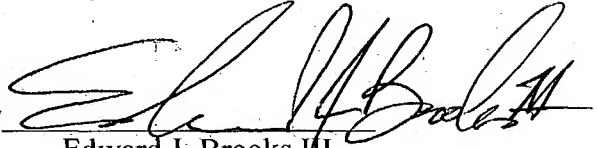
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